



Denbigh Aviation Academy Work Group
Tuesday, September 19, 2017 10:00 a.m.
Room 300-A, Pocahontas Building
Meeting Summary

The Denbigh Aviation Academy Work Group of the Joint Commission on Technology and Science (JCOTS) met on Tuesday, September 19, 2017. Senator John Cosgrove, vice-chairman of JCOTS, called the meeting to order.

The meeting opened with a series of presentations related to Denbigh Aviation Academy and other educational aviation groups in the Commonwealth. Representatives included Bud Oakey from the Virginia Aviation Business Association (VABA), Dr. Eleanor Blowe and Dr. Aaron Smith from Denbigh Aviation Academy, Cindy Hasselbring from the Aircraft Owners and Pilots Association (AOPA), Lieutenant Colonel Keith Mottas from Civil Air Patrol (CAP), and Dean Jim Molloy from the Liberty University School of Aeronautics.

Though generally unconnected, the representative groups all share the mission of providing educational opportunities that grant immediate or quick access to employment in the aviation and aerospace industries upon program completion. The purpose of the JCOTS study of Denbigh Aviation Academy was to connect these groups and learn not only how they are structured, but how to effectively promote their mission in light of the growing need for aviation and aerospace employees as a result of increased use of unmanned aerial systems (UAS) and demand from public, private, and military sources.

Bud Oakey from VABA began the presentations by introducing the group topic. He said that Virginia, though home to educational opportunities, does not have the employment base to meet the coming demand for aviation jobs. He cited the 2017 Aerospace manufacturing attractiveness rankings published in August by PricewaterhouseCoopers as evidence of this. He said that the main problem is that parents and students do not know these aviation opportunities are available and that the dialogue should focus on specific aviation programs and careers with specific license and training requirements, as opposed to general programs promoting STEM.

Dr. Eleanor Blowe, principal of Denbigh Aviation Academy, spoke next. She gave a general overview of the school, stating that Denbigh may be the Commonwealth's best-kept secret but that it does not want to be. She explained that the program curriculum is four years long, open to students outside of the attendance zone, and focused on specialized, project-based learning. A big component of the school is to help students obtain real industry certifications and licenses, such as by preparing for and taking the Workplace Readiness Skills Assessment for the Commonwealth and the FAA Private Pilot Written Test. Dr. Aaron Smith, program director at Denbigh, spoke about how the

school has worked toward creating a dynamic workforce with projects and creative curricula. He said that, according to the 2016 Boeing Pilot & Technician Market Outlook Report, there will be a worldwide need for two million new aviation personnel by 2035.

At the end of Dr. Smith's presentation, Delegate Plum asked whether sophomores and juniors can enter the program. Dr. Smith replied in the affirmative, stating that the academy makes the program as available to prospective students as possible. Senator Cosgrove asked whether Standards of Learning (SoL) get in the way of the curriculum at Denbigh, and how Denbigh is able to offer courses beyond the SoL required minimums. Dr. Smith responded that SoL does indeed get in the way, but by using creative scheduling, such as having students take certain credits like physical education over the summer, the school is able to meet the SoL requirements while offering the extra curricula.

Cindy Hasselbring, senior director of AOPA's High School Aviation Initiative, spoke next. She said that the need for training programs comes from an estimated need for 112,000 new pilots and 127,000 new aviation technicians before 2035. This is partly because the number of active pilots has been falling since 1980. She said that there are other schools similar to Denbigh that AOPA provides curricula to for free. The AOPA curriculum is in field testing now and will be fully available in four years.

Delegate Plum asked if the Virginia Board of Education had been contacted about incorporating AOPA curricula into schools, and Mr. Oakey responded that doing so was the next step for the work group because maneuvering around SoL takes time. Multiple members asked about various aviation programs that were present in Virginia communities, such as at Tidewater Community College and in Fairfax. Mr. Oakey responded that continuation of aviation programs depends on demand rather than the successful licensing and certification of its students. Many upcoming students do not realize such a program or career path is available to them and thus do not consider it. In the case of some programs, their discontinuation was a result of the perceived expense of the programs when other areas of the school districts such as infrastructure were in need of funds.

Lieutenant Colonel Keither Mottas of Civil Air Patrol (CAP) spoke next. He gave a general overview of CAP, highlighting that the program is mission critical to the air force, that CAP provides free curricula to schools as well, and that CAP touches over 320,000 students' lives.

Delegate Plum asked about Virginia's participation in CAP, and Lieutenant Colonel Mottas responded that the level of participation was comparatively very low as a result of SoL. He said that while costs of programs are tailored to be low in accordance with most schools' budgets, the time and commitment to working around SoL and to creating a program is often too great for many schools.

Jim Molloy, dean of Liberty University's School of Aeronautics, spoke last. He stated that over the next 20 years, there will need to be 648,000 new airline mechanics and 637,000 new pilots worldwide and there will need to be tens of thousands of rated UAS pilots. He said that less than 4% of aviation employees are female, less than 2% are African American, and the number of female African Americans in the industry can be counted in the dozens. He explained that pay has started to increase to meet the demand

for pilots, after many years of stagnation. To meet the demand, Dean Molloy said, Liberty hosts solo camps that get teenagers to achieve a private pilot's license and fly an aircraft solo in just 10 days, for \$1,700. He said that the bigger solutions are to market the industry and training programs to young people, especially women and persons of color, and that Virginia needs to be well-known as an aerospace and aviation state.

In closing, Mr. Oakey said that general aviation is not just for fun but is increasingly useful for small businesses. He added that the industry is not just mechanics and pilots, but that it encompasses electricians, interior designers, fluid and hydraulics engineers, and an incredibly diverse array of skills and other industries.

After the formal presentations, Senator Cosgrove opened the room to discussion.

Donna Lawson of NASA Langley Research Institute said that NASA is breaking ground on a new computational research center and is open to partnering with community schools for the benefit of the group's mission.

Senator DeSteph said that another often overlooked aspect of the aviation industry is data analytics, which has a need for workers and often pays very well.

Michele Satterlein, representing American Airlines, said that American Airlines is always worried about pilot shortages. She said that there are privacy concerns among the general public related to UAS that must be overcome in order to promote the industry. Senator Cosgrove requested that, at the forthcoming Aviation Day during the upcoming General Assembly session, there be a UAS demonstration to promote the good uses for UAS.

Delegate Plum expressed frustrations about failure in the past to connect education programs to growing industries. Senator DeSteph suggested that the Virginia Board of Workforce Development should hear about the topic as well.

The meeting was adjourned. The next full JCOTS meeting will be on Wednesday, December 6, at 10:00 a.m. in Room E007 of the Pocahontas Building.
